

EXPRESS MAIL NO. EL615486174US

PTO/SB/21 (08-00)

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Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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# TRANSMITTAL FORM

To be used for all correspondence after initial filing)

Application Number	10/006,869
Filing Date	December 3, 2001
First Named Inventor	Orest W. Blaschuk
Group Art Unit	1631
Examiner Name	
Attorney Docket No.	100086.407C7

## ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement; Forms PTO-1449 (5 sheets) <input type="checkbox"/> Cited References <input type="checkbox"/> Certified Copy of Priority Document(s) <input checked="" type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input checked="" type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request for Refund	<input type="checkbox"/> CD(s), Number of CD(s) _____ <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Return Postcard <input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below): <u>Preliminary Amendment</u> <u>Copy of Supplemental</u> <u>Assignment from parent</u> <u>Copy of page 1 application as filed</u> <u>Copy of Filing Receipt w/Corrections</u> <u>Copy of Formalities Letter</u>
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Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Individual Name	Qing Lin, Ph.D.	 <b>00500</b> PATENT TRADEMARK OFFICE
Signature		
Date	5/2/02	

<h1 style="text-align: center;">FEE TRANSMITTAL</h1> <h2 style="text-align: center;">for FY 2002</h2> <p style="text-align: center;"><i>Patent fees are subject to annual revision</i></p>		<i>Complete if Known</i>	
		Application Number	10/006,869
		Filing Date	December 3, 2001
		First Named Inventor	Orest W. Blaschuk
		Examiner Name	
		Group Art Unit	1631
TOTAL AMOUNT OF PAYMENT (\$)		2,119.35	Attorney Docket No. 100086.407C7

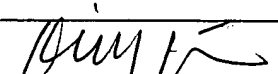
<b>METHOD OF PAYMENT</b>	
<input checked="" type="checkbox"/> Payment Enclosed: <input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other	
<input type="checkbox"/> Deposit Account: Deposit Account Number: <b>19-1090</b> Deposit Account Name: <b>Seed Intellectual Property Law Group PLLC</b>	
The Commissioner is authorized to (check all that apply) <input type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee <input checked="" type="checkbox"/> Charge any deficiencies	
to the above-identified deposit account.	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.	


<b>FEE CALCULATION</b>					
<b>1. BASIC FILING FEE</b>					
Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	740	201	370	Utility filing fee	370
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	
SUBTOTAL (1)					(\$ 370)

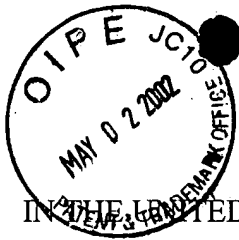
<b>2. EXTRA CLAIM FEES</b>							
Total Claims	<b>146</b>	-20** =	<b>126</b>	* Fee from below	<b>9</b>	=	<b>1134</b>
Independent Claims	<b>8</b>	-3** =	<b>5</b>	* Fee from below	<b>42</b>	=	<b>210</b>
Multiple Dependent				* Fee from below		=	<b>140</b>
<b>Large Entity</b>		<b>Small Entity</b>					
Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description			
103	18	203	9	Claims in excess of 20			
102	84	202	42	Independent claims in excess of 3			
104	280	204	140	Multiple dependent claim, if not paid			
109	84	209	42	** Reissue independent claims over original patent			
110	18	210	9	** Reissue claims in excess of 20 and over original patent			
SUBTOTAL (2)					(\$ 1484)		

\*\*or number previously paid, if greater; For Reissues, see above

<b>FEE CALCULATION (continued)</b>					
<b>3. ADDITIONAL FEES</b>					
Large Entity		Small		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
105	130	205	65	Surcharge - late filing fee or oath	65
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	200
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify) _____					
*Reduced by Basic Filing Fee Paid					SUBTOTAL (3) (\$ 265)

<b>SUBMITTED BY</b>			
Name (Print/Type)	<b>Qing Lin, Ph.D.</b>	Registration No. Attorney/Agent	<b>See Limited Recognition</b>
Firm Name/Address			
Signature		Date	<b>5/2/02</b>

  
**00500**  
 PATENT TRADEMARK OFFICE



EXPRESS MAIL NO. EL615486174US

PATENT

#5/38  
8/7/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Orest W. Blaschuk et al.  
Application No. : 10/006,869  
Filed : December 3, 2001  
For : COMPOUNDS AND METHODS FOR MODULATING  
NONCLASSICAL CADHERIN-MEDIATED FUNCTIONS

Art Unit No. : 1631  
Docket No. : 100086.407C7  
Date : May 2, 2002

Box Missing Parts  
Commissioner for Patents  
Washington, DC 20231

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Commissioner for Patents:

In response to the Notice to File Missing Parts dated January 7, 2002, please find enclosed the following documents:

Check

Copy of Formalities Letter

Respectfully submitted,  
Orest W. Blaschuk et al.  
Seed Intellectual Property Law Group PLLC

Qing Lin, Ph.D.  
(See Limited Recognition in File)

EXPRESS MAIL NO. EL615486174US



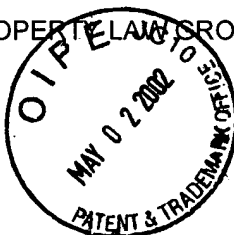
## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/006,869	12/03/2001	Orest W. Blaschuk	100086.407C7

CONFIRMATION NO. 1299

00500  
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 6300  
SEATTLE, WA 98104-7092



## FORMALITIES LETTER



\*OC000000007273926\*

Date Mailed: 01/07/2002

## NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted*

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.  
*Applicant must submit \$ 370 to complete the basic filing fee for a small entity.*
- Total additional claim fee(s) for this application is \$4676.
  - \$3780 for 420 total claims over 20.
  - \$756 for 18 independent claims over 3 .
  - \$140 for multiple dependent claim surcharge.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(l) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 5111.

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

05/06/2002 SDENB061 00000097 10006869

01 FC:201	370.00	OP
02 FC:203	1134.00	OP
03 FC:202	210.00	OP
04 FC:205	65.00	OP
05 FC:204	140.00	OP

## SUPPLEMENTAL ASSIGNMENT

WHEREAS, we, Orest W. Blaschuk, James Matthew Symonds, and Barbara J. Gour (hereinafter referred to as ASSIGNORS), having post office addresses of 4998 De Maisonneuve West, Suite 1520, Westmount, Quebec, Canada H3Z 1N2; 188 Waverley Street, Apt. 303, Ottawa, Ontario, Canada K2P 0V6; and 2890 Donnelly Drive, RR#4 Kemptville, Ontario, Canada K0G 1J0, respectively, are the joint inventors of an invention entitled "COMPOUNDS AND METHODS FOR MODULATING NONCLASSICAL CADHERIN-MEDIATED FUNCTIONS," which is described and claimed in the specification and claims of U.S. Application No. 09/187,859, which we filed in the United States Patent and Trademark Office on November 6, 1998, and for which a patent is sought; this application is a continuation-in-part of U.S. Patent Application No. 09/073,040, filed May 5, 1998, currently pending.

WHEREAS, Adherex Technologies Inc. (hereinafter referred to as ASSIGNEE), having a place of business at 600 Peter Morand Crescent, Suite 340, Ottawa, Ontario, Canada K1G 5Z3, is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and to said invention, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNORS had this assignment, transfer and sale not been made. ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding letters patent, or for the purpose of protecting title to said invention or letters patent therefor.

June 28th, 1999  
Date

Orest W. Blaschuk  
Orest W. Blaschuk

I certify that I know or have satisfactory evidence that Orest W. Blaschuk signed this instrument of his own free will, as a voluntary act for the uses and purposes mentioned in the instrument.

June 28th, 1999  
Date

De. Mui  
Witness

June 28th, 1999  
Date

James Matthew Symonds  
James Matthew Symonds

I certify that I know or have satisfactory evidence that James Matthew Symonds signed this instrument of his own free will, as a voluntary act for the uses and purposes mentioned in the instrument.

June 28th, 1999  
Date

De. Mui  
Witness

June 28th, 1999  
Date

Barbara J. Gour  
Barbara J. Gour

I certify that I know or have satisfactory evidence that Barbara J. Gour signed this instrument of her own free will, as a voluntary act for the uses and purposes mentioned in the instrument.

June 28th, 1999  
Date

De. Mui  
Witness



COMPOSITIONS AND METHODS FOR MODULATING  
NONCLASSICAL CADHERIN-MEDIATED FUNCTIONS

CROSS-REFERENCE TO RELATED APPLICATION

5 This application is a continuation-in-part of U.S. Patent Application No. 09/073,040, filed May 5, 1998.

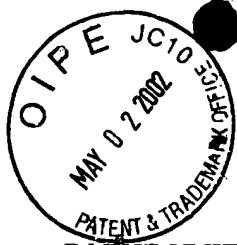
TECHNICAL FIELD

The present invention relates generally to methods for modulating nonclassical cadherin-mediated functions, and more particularly to the use of  
10 modulating agents derived from nonclassical cadherin cell adhesion recognition sequences for inhibiting or enhancing functions mediated by nonclassical cadherins.

BACKGROUND OF THE INVENTION

Cadherins are a rapidly expanding superfamily of calcium-dependent cell adhesion molecules (CAMs) (*for review, see* Munro et al., *In: Cell Adhesion and*  
15 *Invasion in Cancer Metastasis*, P. Brodt, ed., pp. 17-34, RG Landes Co., Austin TX, 1996). All cadherins appear to be membrane glycoproteins that generally promote cell adhesion through homophilic interactions (a cadherin on the surface of one cell binds to an identical cadherin on the surface of another cell), although cadherins also appear to be capable of forming heterotypic complexes with one another under certain  
20 circumstances and with lower affinity.

There are many different types of cadherins. The most extensively studied group of cadherins is known as the classical, or type I, cadherins. Classical cadherins have been shown to regulate epithelial, endothelial, neural and cancer cell adhesion, with different cadherins expressed on different cell types. All classical  
25 cadherins have a similar structure. As illustrated in Figure 1A, classical cadherins are composed of five extracellular domains (EC1-EC5), a single hydrophobic domain (TM) that transverses the plasma membrane (PM), and two cytoplasmic domains (CP1 and CP2). The calcium binding motifs DXNDN (SEQ ID NO:1), DXD and LDRE (SEQ ID NO:2) are interspersed throughout the extracellular domains, and each 110 amino acid  
30 region that contains such motifs is considered a cadherin repeat. The first extracellular



EXPRESS MAIL NO. EL615486174US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Orest W. Blaschuk et al.  
Application No. : 10/006,869  
Filed : December 3, 2001  
For : COMPOUNDS AND METHODS FOR MODULATING  
NONCLASSICAL CADHERIN-MEDIATED FUNCTIONS

Art Unit No. : 1631

Docket No. : 100086.407C7

Date : May 2, 2002

Box Missing Parts  
Commissioner for Patents  
Washington, DC 20231

REQUEST FOR CORRECTED FILING RECEIPT

Commissioner for Patents:

Attached is a copy of the official Filing Receipt received from the PTO in the above-identified application, for which issuance of a corrected Filing Receipt is respectfully requested.

There is an error with respect to the following data, which is incorrectly entered.  
There is an error in the omission of the second inventor, which should read:

**James Matthew Symonds, Ottawa, Canada**

In addition, the title of the application is omitted. It should be listed as follows:

**COMPOUNDS AND METHODS FOR MODULATING NONCLASSICAL  
CADHERIN-MEDIATED FUNCTIONS**

The corrections to be made have been marked in red on the enclosed copy of the Filing Receipt. Also enclosed are copies of the Assignment filed in the parent

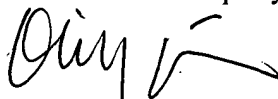


application, U.S. Application No. 09/187,859, showing the correct names of applicants; along with a copy of page 1 of the application as filed showing the correct title.

Respectfully submitted,

Orest W. Blaschuk et al.

Seed Intellectual Property Law Group PLLC



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Qing Lin, Ph.D.

(See Limited Recognition in File)

701 Fifth Avenue, Suite 6300

Seattle, Washington 98104-7092

Phone: (206) 622-4900 / Fax: (206) 682-6031

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05-03-02

EXPRESS MAIL NO. EL615486174US

Receipt  
WTC



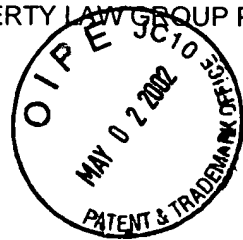
UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
10/006,869	12/03/2001	1631	0.00	100086.407C7	23	117	22

CONFIRMATION NO. 1299

00500  
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 6300  
SEATTLE, WA 98104-7092



FILING RECEIPT



\*OC000000007275420\*

Date Mailed: 01/07/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Orest W. Blaschuk, Westmount, CANADA;  
Barbara J. Gour, Kemptville, CANADA;

James Matthew Symonds,  
Ottawa, Canada

Assignment For Published Patent Application

Adherex Technologies, Inc., Ottawa, ON, CANADA;

Domestic Priority data as claimed by applicant

THIS APPLICATION IS A CON OF 09/187,859 11/06/1998  
WHICH IS A CIP OF 09/073,040 05/05/1998

Foreign Applications

If required, Foreign Filing License Granted 01/07/2002

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

RECEIVED

JAN 14 2002

Title

SEED INTELLECTUAL PROPERTY  
LAW GROUP PLLC

COMPOUNDS AND METHODS FOR MODULATING  
NONCLASSICAL CADHERIN-MEDIATED FUNCTIONS

**Preliminary Class**

424

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).